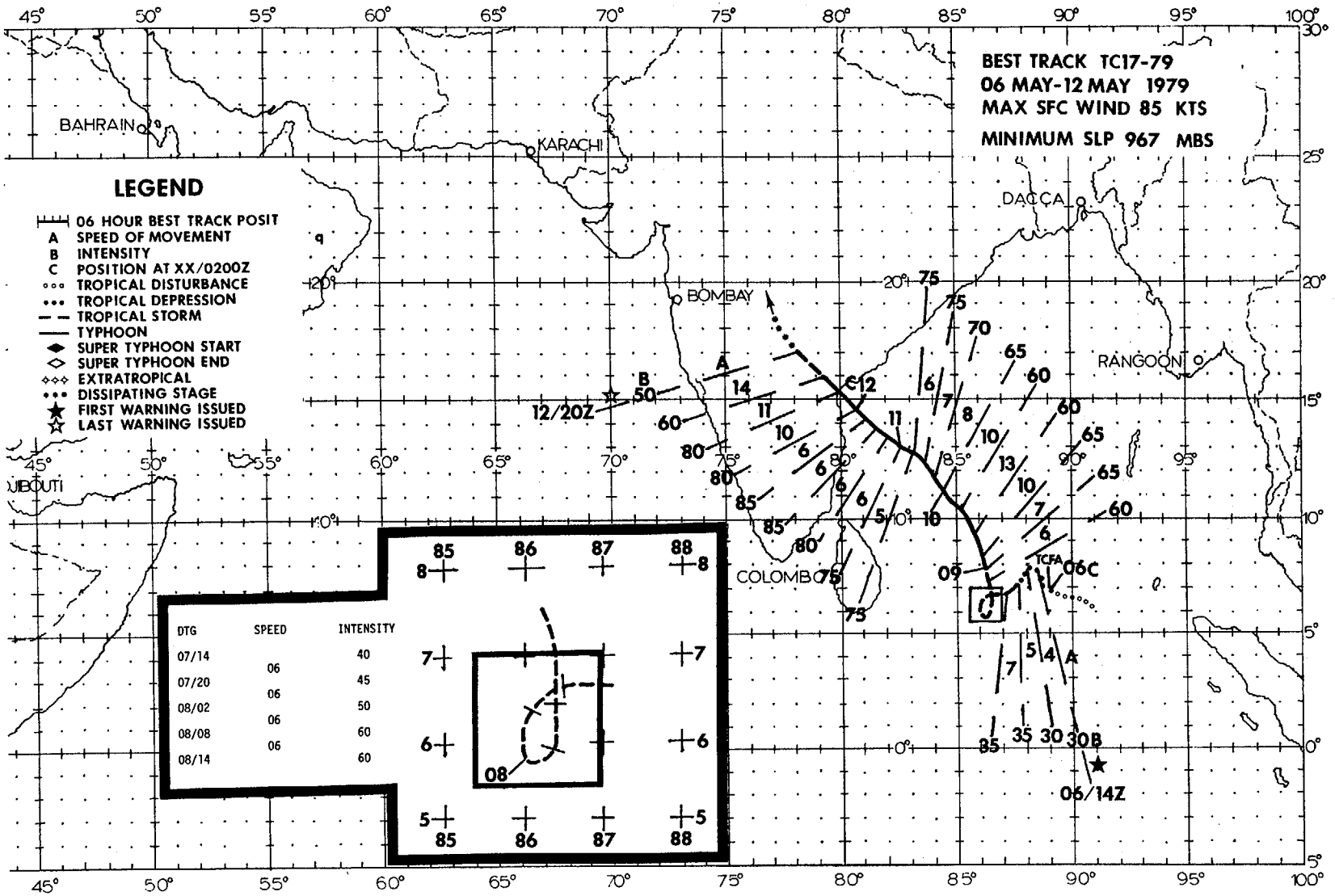
BEST TRACK TC17-79
06 MAY-12 MAY 1979
MAX SFC WIND 85 KTS
MINIMUM SLP 967 MBS
LEGEND
06 HOUR BEST TRACK POSIT
A SPEED OF MOVEMENT
B INTENSITY
C POSITION AT XX/0200Z
TROPICAL DISTURBANCE
TROPICAL DEPRESSION
TROPICAL STORM
TYPHOON
SUPER TYPHOON START
SUPER TYPHOON END
EXTRATROPICAL
DISSIPATING STAGE
FIRST WARNING ISSUED
LAST WARNING ISSUED
BAHRAIN
KARACHI
BOMBAY
DACCA
RANGOON
COLOMBO
DJIBOUTI
12/20Z
09
TCFA
06C
06/14Z
DTG SPEED INTENSITY
07/14 06 40
07/20 06 45
08/02 06 50
08/08 06 60
08/14 06 60
08

TC 17-79 was the only significant tropical cyclone in the Bay of Bengal during the 1979 spring transition season. Attaining typhoon intensity, TC 17-79 was the most destructive cyclone in India since TC 22-77 (Nov 1977) which, coincidentally, followed a similar track.

A Tropical Cyclone Formation Alert and the first warning were precipitated by synoptic reports received from ships participating in the First GARP Global Experiment (FGGE). At 1200Z on 6 May, these ships' observations defined a cyclonic circulation near 07N-088E with reported surface pressures near 1003 mb and wind speeds of 20-25 kt (10-12 m/sec). The first warning on TC 17-79 was issued at 061507Z.

From 060000Z through 061200Z, a strong mid-tropospheric ridge extended westward along 15N with southeast steering flow dominating TC 17-79's movement. During the same time period, a short-wave trough, evident at both middle and upper levels, was deepening over India. Interaction between this ridging and troughing resulted in a loss of definitive steering flow in the vicinity of TC 17-79, producing an erratic north and then south track. Also during this time, TC 16-79 located in the southern Indian Ocean about 750-800 nm (1389-1481 km) to the southwest, began tracking slowly to the southeast possibly initiating a Fujiwhara type interaction.

By 080000Z, a mid-level anticyclone had formed in the northern Bay of Bengal with east-northeasterly steering flow over TC 17-79 resulting in a west-southwest forecast track. From 080000Z through 090000Z, while TC 17-79 intensified (Fig. 3-29), the dominant steering flow shifted to the south then southeast as the mid-level ridge was replaced by a trough and the upper-level trough dug southward over India. As a result of this shift in steering flow, TC 17-79 executed a tight cyclonic loop from 080000Z to 081800Z. From 7 through 9 May, though satellite fix position accuracies improved due to the formation of a well-defined eye, forecast errors increased appreciably due to the erratic movement.

By 091200Z, southeast steering flow became dominant with TC 17-79 oscillating about a northwest track until making landfall over India (Fig. 3-30). TC 17-79 struck the east central coast of India at 120800Z, 45 nm (83 km) north of Nellore with maximum sustained winds of 80 kt (41 m/sec). Twenty-one deaths occurred and over 800,000 persons were left homeless as a result of TC 17-79's passage over the Nellore district.

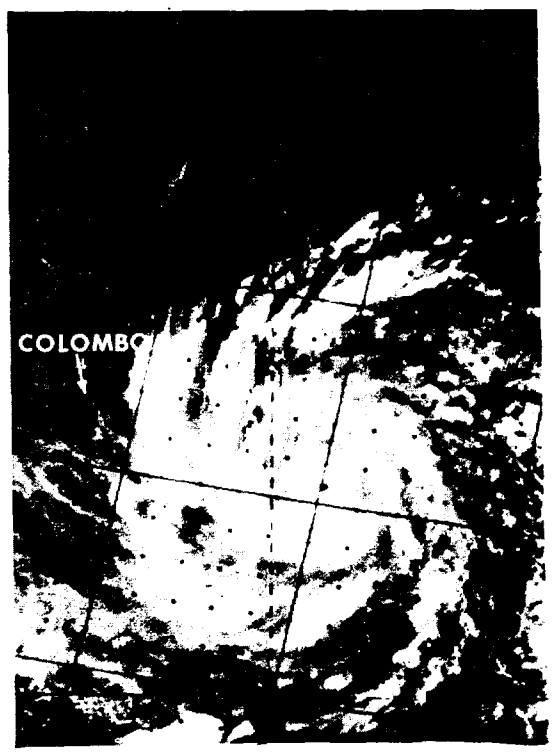

FIGURE 3-29. TC 17-79 with well-defined satellite signature during the erratic cyclonic loop, 8 May 1979, 0528Z. (DMSP imagery from AFGWC, Offutt AFB, Nebraska)

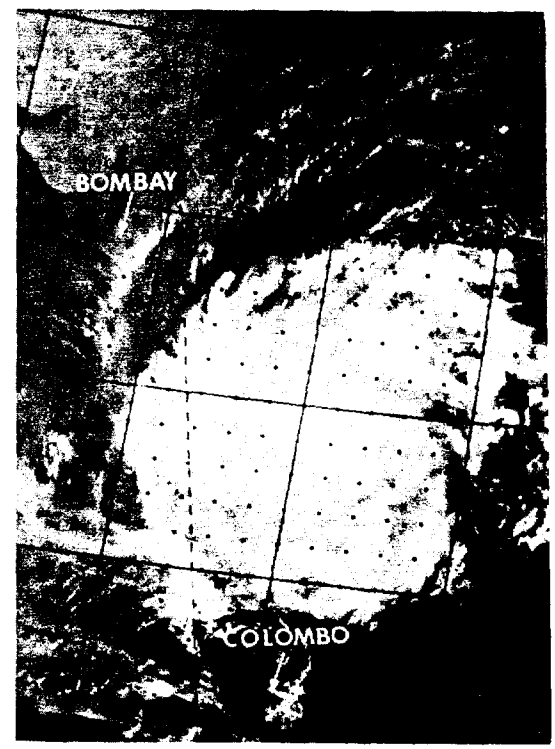

FIGURE 3-30. TC 17-79 just prior to making landfall over east central India with 80 kt (41 m/sec) intensity, 12 May 1979, 0556Z. (DMSP imagery from AFGWC, Offutt AFB, Nebraska)